## Comment Letter O056 Continued

SECTION 3.8 - AGRICULTURAL LANDS

**General Comments**

This section of the EIR/EIS provides only a very broad measure of potential impacts on farmlands and relies on an incomplete measure of thresholds of impact significance for agricultural resources, pursuant to the *CEQA Guidelines*.

3.8.1, Regulatory Requirements and Methods of Evaluation. This section cites PRC 21060.1 and CEQA Guideline 21095[a] as references for consideration of agricultural land conversions in the environmental review process. PRC 21060.1 defines 'Agricultural Land' as prime farmland, farmland of statewide importance, or unique farmland. CEQA 'Guideline' 21095[a] is actually the citation from the CEQA statute, not the *Guidelines*. PRC 21095[a] identifies the Land Evaluation and Site Assessment (LESA) Model as an optional method to ensure that significant effects on the environment of agricultural land conversion are quantitatively and consistently considered in the environmental review process. However, the method of evaluation of impacts that follows in Section 3.8.1, 3.8.2, and 3.8.3 does not utilize the LESA model to distinguish significant effects.

Where the LESA model is not utilized, reliance is placed upon *CEQA Guidelines* Appendix G criteria for impact significance (i.e., 'thresholds of significance'). In addition to conversion of prime farmland, unique farmland or farmland of statewide importance, the *CEQA Guidelines* Appendix G criteria for Agricultural Resources include 'conflicts with existing zoning for agricultural use or a Williamson Act contract' as an explicit factor to be addressed. Although the Williamson Act is described in Section 3.8.1, there is no further discussion or quantification of possible conflicts with Williamson Act contracts in EIR/EIS Section 3.8. The number of parcels under such contracts that are impacted by the Modal and HST System Alternatives, including the HST alignment options, should be identified, even at this Program EIR level of review. [Note: Section 7.3.1, CEQA Significance Thresholds, indicates the CEQA checklist thresholds (Appendix G) have been used to evaluate the significance of effects of the HST Alternative.]

O056-7

**Bakersfield to Sylmar Segment**

Figure 3.8-11 is incorrectly identified in the List of Figures as the Modal Alternative Improvement Locations Bakersfield to Los Angeles. It is actually the High-Speed Train Improvement Locations, although the figure itself does not identify it as such.

The I-5 alignment HST options within the Bakersfield to Sylmar segment are identified as having the greatest potential farmland impacts (63 acres) (p. 3.8-16 and Table 3.8-1). The EIR/EIS failed to address





impacts to farmland and the direct growth-inducing impacts of this alignment. This alignment would provide for shorter commute times to the Los Angeles region. For example, commute times to downtown Los Angeles would be substantially shorter than existing commutes. Given a shorter commute and the reduced housing costs of the Bakersfield area, there would be considerable pressure to convert more agricultural lands for residential uses. A similar comparison can be made to the San Fernando Valley development pattern of 50 years ago. Again, this was an agricultural area, with more affordable housing opportunities within a reasonable commute distance to downtown Los Angeles. One can expect a similar development pattern with the High-Speed Train, providing the shorter and more affordable commuting opportunities.

This is in contrast with the SR-58/Soledad Canyon (Antelope Valley) alignment, which is identified as having no impact on farmlands.

Section 3.8.5, Mitigation Strategies, suggests that specific farmland mitigation strategies should consider measures such as 'protection or preservation off-site lands to mitigate conversion of farmlands or acquiring easements, or payment of an in-lieu fee'. In this instance, the ability to mitigate the I-5 HST alignment's impact on farmlands through creation of agricultural easements or other identified measures may be limited by appellate court findings in *Friends of the Kangaroo Rat v. California Department of Corrections [111 Cal.App.4th 1400 (2003)]*. In this case, the court held that the creation of an agricultural easement does not fall within the definition of "mitigation" set forth in *CEQA Guidelines* 15370. Prime farmland is considered a finite resource, the loss of which cannot be mitigated by payments to continue farming on other lands already being farmed. Further, the court noted that acquiring undeveloped land for conversion to agricultural use would likely have natural habitat impacts, which are not environmentally beneficial, and converting developed land to farmland was infeasible for obvious reasons.

O056-7 cont.

Short of avoidance of important farmlands altogether, the impacts of the I-5 HST alignment option within the Bakersfield to Sylmar segment are likely to be found to be significant and unavoidable, should this alternative be carried forward to project-level environmental review.

## Comment Letter O056 Continued

### SECTION 3.9 - AESTHETICS AND VISUAL RESOURCES

The EIR/EIS fails to accurately characterize the visual setting along the I-5 corridor through the Tehachapi Mountains by ignoring the scenic qualities at Tejon Pass such as Tejon Lake, adjacent meadows and oak studded hillsides. The Kern County Circulation Element of the General Plan designates this segment of the I-5 as an "Eligible Scenic Route," while the County Master Environmental Assessment/Master Environmental Impact Report for the Year 2000 General Plan designates this segment of the I-5 corridor as Class III (Significant Value Visual Space).

The failure to account for these designations and resources results in an analytical gap for that segment of the I-5 traversing Tejon Pass and skewed the conclusions contained in the report. For example, the EIR/EIS fails to describe in any meaningful detail the potential visual impacts associated with the tunnel portals, construction stockpiles, and/or the roadways necessary for access. Staging of equipment and stockpiling of soils associated with tunnel portal construction in the hillside north of Tejon Lake would be highly visible from this segment of the I-5 corridor. Additionally, the analysis fails to consider the long term visual consequences associated with creation of the earthen berm (maximum height of 250 feet) needed to elevate the rail line at a gentle grade prior to entering the Tehachapi Mountains at the Grapevine. The analysis fails to consider the effects of these activities and improvements along a designated scenic route thereby preventing meaningful evaluation and comparison between alternatives. O056-8

The section also fails to mention the potential visual impacts to the recreation areas along the I-5 corridor and the potential impacts to the Angeles National Forest viewshed. The resulting visual impacts along the I-5 route would be visible to many more people than those along the SR-58 Corridor Route.

The analysis of the relative aesthetic and visual impacts of the HST alignment alternatives in the Bakersfield to Los Angeles segment (p. 3.9-17) is confusing and the conclusions lack support. The I-5/Wheeler Ridge alignment is identified as having the lowest aesthetics/visual quality impacts of the alignments in the Bakersfield to Sylmar segment, yet the Wheeler Ridge and Union Avenue alignment options are both identified as having high-contrast impacts related to aerial structures. This section also indicates "the landform in the mountainous areas on the Antelope Valley corridor would be largely unaltered," yet the next sentence indicates "visual contrast related to cut and fill in these areas would therefore be greater than along the I-5 corridor"—an apparent contradiction.

Given the high visual amenity and sensitivity of the I-5 corridor, particularly between the Grapevine to Santa Clarita section that includes scenic national forest lands within the viewshed, it is difficult to justify the conclusion that either of the I-5 alignment options would be superior to an Antelope Valley alignment. As noted above, the visual impact of a HST construction and operation along an I-5 alignment





would likely be visible to more people along non-tunnel segments than with the Antelope Valley alignment.

Although a photo simulation of a potential extensive cut slope in Soledad Canyon is depicted in Figure 3.9-18B, no corresponding photo simulation of visual impact of the HST is provided for the I-5 alignment within the Bakersfield to Sylmar segment. To portray visual impact in a balanced light, such a simulation should be provided in this section depicting a 'worst-case' I-5 scenario.

**Bakersfield to Los Angeles Aesthetics and Visual Quality Technical Evaluation**

The report is missing the visual simulations for all locations on the route. Of particular interest, however, are the maps of the visual simulation areas showing rather precise route locations. See for example Figure 4.3-1; 4.3-3; 4.3-4; 4.3-5; 4.3-6 and 4.3-8. If this level of route detail and alignment specificity was available for the visual simulations, why wasn't it used for the other disciplines? The document also fails to include photo simulations discussed in the technical report. Figure 4.3-2 on page 39 of the document is blank. The caption states that the figure is of existing conditions and photo-simulations. There are no such figures in the document. O056-8 cont.

The assessment that both routes have similar types and levels of visual impacts (page 49) is misleading. The impacts associated with the I-5 Tehachapi Corridor would be to State Parks and Recreation areas and lands within the Angeles National Forest that have strict guidelines for visual degradation. This route would also be visible by a higher number of people on a daily basis when compared to the SR-58 route.

**Comment Letter O056 Continued**

SECTION 3.10 - PUBLIC UTILITIES

Table 4.0-1 of the Technical Evaluation grades the HST alignment through the SR-58 alignment through the Antelope Valley as having the lowest impact potential, while the I-5 Tehachapi HST alignment rated a high impact potential with the most conflicts. Table 3.10-2 presents a summary of potential utilities conflicts for project alternatives. A footnote to this table states: "The number of potential conflicts associated with the HST Alternative is provided as a range of potential conflicts. For each region, the HST Alternative generally includes various design options within each segment of the region. These routes serve only to provide a reasonable range of impacts for comparison and do not represent any selection of a preferred option." It should be noted that given the conclusions made in Section 3.10, Public Utilities, that indeed the SR-58 alignment would have the fewest impacts and should consequently be preferred over the I-5 alignment.

O056-9



SECTION 3.11 - HAZARDOUS MATERIALS AND WASTES

**General Comments**

This section is focused on the topics of hazardous materials and wastes, and does not discuss other hazards listed in *CEQA Guidelines* Appendix G (VII., Hazards and Hazardous Materials) that may result in significant impacts. The EIR/EIS must be revised to address all hazards listed in *CEQA Guidelines* Appendix G (VII., Hazards and Hazardous Materials).

For example, issues associated with 'potential impairment or interference with an adopted emergency response plan or emergency evacuation plan' (*CEQA Guidelines* Appendix G-VII.g) are not addressed here. Although various 'safety' considerations associated with the system alternatives are addressed in EIR/EIS Section 3.2, Travel Conditions, there is no apparent discussion anywhere in the EIR/EIS text of emergency response or emergency evacuation impacts associated with the tunneling requirements of various HST alignments, such a discussion must be included in the text. Neither Section 3.2, Travel Conditions, nor Section 3.13, Geology and Soils, deal with this aspect of the HST system and alignment alternatives and must be revised to address this issue. It would appear that the closest the EIR/EIS comes to dealing with this potentially significant impact of emergency response and evacuation of the HST in a tunnel mode is on page 3.2-22 (Travel Conditions), where it is noted that no HST injuries or fatalities have ever occurred in Japan as a result of a seismic event.

O056-10

The information in Section 3.11 is so broad and preliminary as to make hazardous materials and wastes considerations insignificant in the selection of a system alternative or selection of HST alignments for further consideration. This section must be revised to separate discussion between alignments so that a reasoned analysis of impacts can be undertaken.

Figure 3.11-1, Hazardous Material and Waste Locations in the Study Area. Table 3.11.3-1, Potential Hazardous Material and Waste Sites Comparison—Modal and High-Speed Train Alternatives.

Due to the statewide scale of the figure, it is difficult to correlate the mapped sites with the numbers of identified sites in the table, for the Bakersfield to Los Angeles region (and Bakersfield to Sylmar segment). For ease of reference and consistency with other sections of the EIR/EIS, a Bakersfield to Los Angeles region base map is needed in the EIR/EIS in order to facilitate a comprehensive analysis of potential impacts.

Appendix 3.11-A, Results of Hazardous Materials Database Searches. An SPL Listing site is identified for the I-5 Grapevine Corridor (via Union Avenue Corridor) that does not appear on Figure 3.11-1,

## Comment Letter O056 Continued



Hazardous Materials and Waste Locations in the Study Area. Consequently, Figure 3.11-1 must be revised to include this listing.

There is relatively little to distinguish between the alignment alternatives in the Bakersfield to Los Angeles segment in terms of the number of sites identified. As a result, the identification of alignments in this segment with 'greatest potential for impact' and 'least potential for impact' is not particularly meaningful. Additionally, in order to ascertain and compare alignment impacts, the EIR/EIS must provide a discussion as to the disposition of tunneling wastes associated with the I-5 alignment. This information is imperative to the analysis to determine comparative impacts.

**Hazardous Materials/Wastes Technical Evaluation, Bakersfield to Los Angeles Region**

2.3, Hazardous Materials Used in Operation, Maintenance, and Construction of the Alternatives. This section indicates that a 'qualitative review' of these impacts will be included in the Program EIR/EIS. However, Section 3.11 discusses only the impacts of existing or potential hazardous materials and wastes sites upon construction, operations, and maintenance activities (page 3.11-3). Hazardous materials used must be identified or characterized in the EIR/EIS.

O056-10 cont.

It is apparent after reviewing the tabulated breakdown of sites in the NPL/Superfund, SPL Listings, and SWLF Listings that a single recorded site can fall into one or more listing categories. This must be clarified in EIR/EIS Section 3.11 and Appendix 3.11-A with regard to the quantification of sites.

The information in Table 4.0-1, Detailed Analysis/Comparison Table, and the summary in Section 4.3 for the HST Alternatives are helpful in understanding the nature, type, and location of hazardous materials and waste sites within this segment. Section 3.11, Hazardous Materials and Wastes, must be revised to include this information to facilitate the review.



**SECTION 3.12 - CULTURAL AND PALEONTOLOGICAL RESOURCES**

This section presents a potentially insufficient assessment of cultural resources impacts by failing to clearly factor in the percentage of each HST alignment alternative that has not been surveyed. In so doing, the estimation of the number of cultural sites potentially impacted can be very misleading. Also, use of a methodology for assessment of historic impacts based primarily upon the percentage of each alternative corridor that passes through areas that originally developed in specific predefined historic time periods is inconsistent with common practice. This provides a poor substitute for preliminary surveys for historic structures and/or quantification of the number of sites listed on the National Register of Historic Places (NRHP) that may be impacted.

**B. Method of Evaluation of Impacts**

***Archaeological Sites and Traditional Cultural Properties***

Traditional Cultural Resources Properties concerns seem to be focused on the I-5 Route between Grapevine and Frazier Park. There are known traditional properties along the route. Cultural resources along the I-5 route and impacts to Fort Tejon and other sites could be of concern. Even indirect impacts to Fort Tejon, even indirect would be severe as it is a NRHP site as well as a State Park and State Historic Landmark.

O056-11

The methodology for determining low medium or high impacts is based on "known" information. Thus, if an area has been subjected to extensive surveys, there is a greater potential to have a high impact. This might not be the case in the real world. Portions of the Tejon Ranch have not been surveyed. A more appropriate way to evaluate would be to have a number indicating the percent of the route that has been surveyed. Using this number with the number of sites in an area would be a better method for comparison and must be included within the analysis.

***Historic Structures***

This analysis is inconsistent with common practice methodology. The methodology states that any developed areas might have impacts based on nothing other than being built more than 50 years ago. It specifically states, "Specific structures from the historic period were not identified for this program level analysis. Instead, the percentage based on linear miles of each alternative corridor that passed through areas that originally developed in specific predefined historic time periods (before 1900, 1900 to 1929, and 1930 to 1958) was determined from historical maps, aerial photographs, and local planning documents of the history of the region." (p. 3.12-5).

## Comment Letter O056 Continued



Again using a methodology that documents what percentage of a route has been surveyed, what types of sites have been identified and what number of existing NRHP sites are present on a route would be a more comparable approach to an environmental analysis and consequently the EIR/EIS must incorporate this approach and the EIR/EIS be revised accordingly. Additionally, neither the technical report nor the EIR/EIR section addresses the settlement of Ft. Tejon or Lebec as occurring in the 1850s. How can Ft. Tejon, which is listed as a State Historical Monument, be omitted from the discussion of historical resources in Kern County? *Guidelines* Section 15126.2(a) states: ..."the lead agency should normally limit its examination to the changes in the existing physical condition in the affected area as they exist at the time the notice of preparation is published." How can an impact analysis discuss the location of Ft. Tejon in relation to the proposed I-5 alignment if Ft. Tejon has not been addressed in the existing setting section of the document? The EIR/EIS must be revised to thoroughly address the importance of Ft. Tejon in the region. Given the lack of information with regard to Ft. Tejon and its importance to the region, the conclusions with regard to impacts from the HST on Ft. Tejon along the I-5 alignment are suspect and must be revised.

### 3.12.2 Affected Environment

#### A. Study Area Defined: Area of Potential Effect (APE)

There is no reference in the rest of the section on where the APEs (study areas) are defined for the routes. Does the I-5 corridor have the same width the entire length? What are the impacts to SR-58/Soledad Canyon? The document states (page 3.12-6) that the APE for cultural resources for the proposed HST Alternative is as follows:

- 500 feet (152 m) on each side of the centerline of proposed new rail routes where additional right-of-way could be needed.
- 100 feet (30 m) on each side of the centerline for routes along existing highways and railroads where very little additional right-of-way would be needed.
- 100 feet (30 m) around station locations.

There is no indication that similar areas were examined for each alternative. It may be possible that one route was primarily analyzed at 100 feet and another was done at 500 feet. Clarification on this issue is required for analysis purposes.

O056-11 cont.





### 3.12.4 Comparison of Alternatives by Region

#### C. Bakersfield to Los Angeles

*High-Speed Train Alternative*

Based on the text (page 3.12-22), there is a high potential for unidentified buried resources along the I-5 route. These resources could have significance to Native American Groups and may be difficult to mitigate. There are also NRHP sites along this portion of the route that could be affected by construction activities. The EIR/EIS must be revised to reflect these resources and the potential impacts.

The SR-58/Soledad route has a low potential for archaeological sites and there is little mention of Native American concerns. The corridor through the Antelope Valley has the potential to impact 68 recorded archaeological sites in an undefined corridor width. (Note: The Technical Report indicates that there are only 20 sites.) The report states that most of the sites in the Antelope Valley corridor are historic trash scatters along the railroad (these would be unlikely to be NRHP eligible). The EIR/EIS must be revised to clarify the above noted discrepancies.

**High-Speed Train Alignment Comparison**

*General Comments Pages 3.12-22 and -23)*

This section is conflicting and it is difficult to ascertain what is being said. The first paragraph discussion addresses archaeological sites and then it says that there are historic trash scatters along the rail corridors in the Antelope Valley. The section must be revised to discuss potential impacts associated with the I-5 alignment and another paragraph(s) to discuss the potential impacts of the SR-58 corridor alignment option. As written, it is difficult to ascertain what impacts should be assigned to which potential alignment and consequently the EIR/EIS must be revised to clearly differentiate between alignments. The comparison of the two alignments may be adequate, but is only useful is if there are two separate discussions preceding the cumulative discussion, of the I-5 and SR-58 alignments. For instance, the I-5 corridor has a number of historic structures - some which are on the NRHP and some Historic Landmark Sites. The EIR/EIS must be revised to clarify the above noted inconsistencies.

Generally, it is difficult to determine what has been studied, what the widths of study are, whether they are the same width between the two alternative alignments. There is no comparison provided. This, is coupled with the fact that there is no way to determine if the lack of sites on a portion of the route is due to little or no survey coverage or the true lack of archaeological materials. The EIR/EIS must expand this

O056-11 cont.

## Comment Letter O056 Continued



discussion and address which portions of the routes were not analyzed due to a lack of surveys and for comparison purposes.

**Cultural Resources Technical Report**

Figure 2.2-1 (p. 15), Approximate Location of Native American Groups, In Project Region at the Time of European Contact. Based on expansive tribal territories, this map must be revised to include the tribes west of the Tatavium (Emigdiano Chumash?) and north of the Kitanemuk.

Page 32 indicates that response from Native American groups has either not been received, or not been sent out. This appears to be an unanswered question left unresolved in the technical report and must be addressed.

**Section 3.3 - RANKING POTENTIAL IMPACTS TO CULTURAL RESOURCES BY ALTERNATIVE.**

**Comment: Table 4.0-1, Detailed Analysis/Comparison Table: Impacts to Cultural Resources Bakersfield to Los Angeles.** The High-Speed Train Alternative lists the Antelope Valley as having 120 archaeological sites. The text on page 40 indicates that there are 20 sites. Based on addition in the EIR/EIS the 20 sites would appear to be the correct number.

O056-11 cont.

**Comment: Section 4.3.1, Alignments.** The percentage of surveyed area within the Antelope Valley Corridor (50% page 40) may explain the higher number of sites and the higher number of sites per mile (page 40). If the percentage of the Corridors surveyed were included in the calculations used to document all segments, it would be easier to assess the information presented in the Technical Evaluation. Another useful tool would be the number of NRHP listed and eligible sites, which should be provided for analysis. Several sites in the SR-58 and Antelope Valley segments are not eligible for NRHP and thus their significance to the count is diminished.

**Bakersfield to Los Angeles Paleontological Resources Technical Evaluation**

***4.3.1 Alignments***

None of the sections discuss tunneling impacts on paleontological resources, or provide a comparative evaluation of alignments in this regard. This is one of several issue areas in the EIR/EIS where the subsurface impacts could be more severe than surface impacts. Based on the current information, it is impossible to make a comparative finding of impact, other than the fact that the I-5 Tehachapi Corridor has more miles of tunneling than the SR-58/Antelope Valley/Soledad Canyon Corridor. Consequently, the EIR/EIS must be revised to provide this analysis.



**SECTION 3.13 - GEOLOGY AND SOILS**

Table 3.13-1, Ranking System for Comparing Impacts Related to Geology/Soils/Seismicity, page 3.13-2, is misleading. This is an issue of significant concern, and it is important that the EIR/EIS address this issue fully and accurately in order to comply with CEQA. As an example, with regard to the issue of "Difficult Excavation" the impact rating is high, medium, or low based upon percentage of length. Therefore, if one had to tunnel through solid bedrock for less than 10 percent of an alignment, the resulting impact would be low. Whereas, if an alignment had a longer length of excavation, even with less difficult terrain or soil features, the ranking would be high.

The ranking system places too much emphasis on length, as opposed to truly how difficult the excavation would be based upon true determining factors such as soil, geologic formations, slope, etc. As an example, Table 3.13-A-4 concludes that the I-5: Tehachapi Corridor is ranked "L"- for low impact. This conclusion is illogical. Considering the amount of excavation, the type of geological materials and the tunneling that would be necessary for this alignment, the conclusion that impacts would be low defies logic.

Even if the percentage of length were an appropriate evaluator (which it is not), the Biological Resources Technical Evaluation, Table 1.2-1 indicates that the length of miles of tunneling for the I-5 Tehachapi corridor is 22.93 miles. One would also assume that this will be difficult excavation, given the geologic formations at this location, as described in the *Final Report - A Comparative Analysis of Tunnel Construction Times, Costs and Risks Associated with the choice of High Speed Rail Tunneling Alignment between Los Angeles and Bakersfield*, Transmetrics and Geodata, January 31, 2003. This report clearly discusses the geological difficulties with the I-5 alignment.

O056-12

> *"Metamorphic to granitic rock types shall be encountered. Tunneling shall intersect a very tectonically disturbed zone. Major regional faults are (i.e., Garlock and San Andreas systems) several hundred meterswide, while other important faults (e.g., Pleito thrust zone, Pastoria fault) and a certain number of minor shear zones will be crossed. Poor to very poor conditions can be anticipated through these zones, with a high potential for ground instability phenomena. Ground squeezing could occur in zones of low rock mass strength to lythostatic pressure ratio, while wedge-like instabilities could occur as a consequence of the blocky nature of the rock mass. Zones bounded by successive fault zones are, on average, expected to be quite disturbed due to significant, though variable, fracture intensity."*

Table 1.2-1 also indicates that with the SR-58 Corridor there is only 6.19 miles of tunneling on what is assumed to be difficult excavation. Yet the I-5 alternative is ranked "Low Impact" and the SR-58 alignment is ranked "High Impact" even with a lesser length of tunneling? This conclusion simply defies logic. Clearly one section of the EIR/EIS is completely incongruous with other sections of the EIR/EIS. The analysis tying "difficult excavation" to length of tunneling grossly understates the severity and significance of the impacts.

## Comment Letter O056 Continued



The ranking system also rates the impacts of slope instability on oil and gas fields with percentage of length. More real determining factors such as topography and soils should be considered when evaluating impacts to slope stability in oil and gas fields. This is an issue of significant concern, and it is important that the EIR/EIS address this issue fully and accurately in order to comply with CEQA.

The revisions to the EIR/EIS must incorporate and include the analysis contained within *Final Report - A Comparative Analysis of Tunnel Construction Times, Costs and Risks Associated with the choice of High Speed Rail Tunneling Alignment between Los Angeles and Bakersfield*, Transmetrics and Geodata, January 31, 2003. This report concludes: "Although the amount of tunneling work involved in the I-5 and the AV alignment are almost the same, be it the 2.5% grade or the 3.5% grade option, the ground conditions along the AV [alignment] are relatively more favorable and hence involve less construction risks, financial risks and contractual risks." The EIR/EIS should not make such unsupported statements given the information provided in the *Final Report - A Comparative Analysis of Tunnel Construction Times, Costs and Risks Associated with the choice of High Speed Rail Tunneling Alignment between Los Angeles and Bakersfield*, Transmetrics and Geodata, January 31, 2003 report.

The Geology and Soils section is confusing at best. It is not clear what locations are associated with the high-speed rail or high-speed rail route alternatives. For example, Page 3.13-11 (5th paragraph: High-Speed Train Alternative discusses the I-5 Tehachapi corridor, from Wheeler Ridge to San Fernando and the Soledad Canyon Corridor. Also on this page (6th paragraph): "The alignment would be designed to cross these faults at grade. Because the impact is expected to be nearly equivalent for these alignments, there is no significant difference between the I-5, SR-58, SR-138 and Wheeler Ridge alignments with regard to fault crossings." The discussion of the High-Speed Train Alignment Options Comparison does not indicate which locations of this alignment option are being referred to. Nowhere in the section does it state what improvement locations are associated with each high-speed rail alignment. Appendix Table 3.13-A-3, Summary Table, Geology and Soils, Bakersfield to Los Angeles, does not differentiate which improvement location is affiliated with each high-speed train alignment. Therefore it is impossible to discern what impacts are attributable to each high-speed train alignment. Additionally, the improvement locations should have titles/names that are the same throughout the entire EIR/EIS. Many sections have different names for what appears to be the same improvement location. Additionally in some EIR/EIS sections the "Soledad Canyon Corridor" is attributed to the High-Speed Train Option alternative and in this section is it attributed to the High-Speed Train Alternative. If this information is not consistent throughout the EIR/EIS, one could ask why the discussion of SR-138 is included, since it is not addressed elsewhere in the EIR/EIS. Additionally SR-138 is noted as an improvement location on Table 3.13-A-3. Why would it be discussed in the text if it isn't listed as a part of the table?

O056-12 cont.





Table 3.13-2, Summary of Geology Potential Impact Rankings by Alternative and Segment, is too vague and combines the High-Speed Train and High-Speed Train Alignment Options into one HST category. Each alignment of the HST should be clearly differentiated in the table. By combining impacts, this table is misleading and does not give the decision makers a sense of the relative impacts on each of the High-Speed Train route alternatives.

Lastly, there is no clear discussion of CEQA significance thresholds for discussion and analysis purposes.

The evaluation methods are of concern because they are based upon the "percentage of length" of tunneling, which is a meaningless measure when compared to more realistic criteria such as geologic conditions, slope, and topography. The geologic risks cited in *Final Report - A Comparative Analysis of Tunnel Construction Times, Costs and Risks Associated with the choice of High Speed Rail Tunneling Alignment between Los Angeles and Bakersfield*, Transmetrics and Geodata, January 31, 2003 must be addressed. The section is so unclear as to which improvement locations are associated with each alignment, the necessary evaluation of potential impacts required of the decision makers prior to choosing a preferred alignment will not be possible, as written.

O056-12 cont.

## Comment Letter O056 Continued

SECTION 3.14 - HYDROLOGY AND WATER RESOURCES

**General Comments**

Groundwater in the mountainous regions of the Bakersfield to Sylmar segment, between the points represented by the San Gabriel and Tehachapi Mountains, is highly variable, affected by fracture permeability in rock units and local alluvial valleys that are relatively restricted in their extent. This is the area where the largest expanse of tunnels on the entire project is located. This type of impact has the potential to be extremely significant yet there is little discussion of this issue. It is likely that little in the way of mitigation could be developed but sufficient information is not presently available to allow meaningful evaluation and comparison of impacts.

The information that is presented is of little value. The use of the total number of linear feet of streams that may be impacted is an inappropriate measure of impact significance. The text indicates that the I-5 corridor has a potential to impact 30,000 linear feet of streams, while the SR-58 route would impact 60,000 linear feet. The report does not mention anything related to the types of streams, flow rates, and length of downstream impact. It does not contain a description of the methodology used to calculate the impacted areas nor where the impacts are located. An appropriate number for analysis might be stream crossings (perennial vs. intermittent or ephemeral). This impact could be quantified and could result in a number that could be calculated into acres.

O056-13

This section also includes some inconsistencies and errors as documented in the specific comments that follow.

**B. Method of Evaluation of Impacts**

***Quantitative Assessment (page 3.14-2 and -3)***

Acreage of surface waters and linear feet of surface waters measurement methodology has no relevance (second bullet on page 3.14-2). Measuring the number of linear feet of streams within the analysis corridor has no value unless the number is for downstream impacts only.

**D. Hydrology and Water Resources by Region**

***Bakersfield to Los Angeles***

Groundwater (p. 3.14-7). Groundwater in the mountainous regions between the points represented by the San Gabriel and Tehachapi Mountains is highly variable, affected by fracture permeability in rock units and local alluvial valleys that are relatively restricted in their extent. This is the area where the





largest expanse of tunnels on the entire project is located yet little information is presented to allow meaningful assessment of potential impacts.

Logs for wells placed in the lowlands of the Castac Valley basin indicate that ground water levels have fluctuated greatly over time in response to wet and dry precipitation cycles. Historically, ground water levels in the Castac Valley basin, as well as Tejon (Formerly Castac) Lake, tend to fill up following wet winters and decline after years of drought. Springs are common within the canyons and mountainous portions of the site, and these are also greatly influenced by seasonal and climatic cycles.

The level of Castac (now Tejon) Lake has historically varied from completely dry to its historic high at an elevation of 3,505 feet above Mean Sea Level. The watershed that is tributary to Tejon Lake consists of 39,855 acres or 62.3 square miles. Tejon Lake was formed approximately 10,000 years ago when surface drainage from Cuddy Canyon was directed away from Hungry Canyon and towards Grapevine Canyon, northwest of present day Tejon Lake. Over time approximately 80 feet of sediment accumulated in the upper reaches of Grapevine Canyon, when combined with the extensive movement along the Garlock Fault, produced a depression capable of capturing flows prior to entering the Grapevine region. Thus, Tejon Lake was formed as stream flow carrying sediment eventually ponded behind this alluvial fan.

O056-13 cont.

There is a confining layer at about 20 to 30 feet below the ground surface in Castac Valley, with a free aquifer above that which is hydraulically connected to Tejon Lake. Ground water levels measured in boreholes drilled in this area indicate shallow ground water is present at depths ranging from 5.5 feet to 20 feet. Rotary wash borings drilled by Allan Seward Engineering Geology, Inc. encountered ground water in this valley as high as 1.7 feet below the surface.

As currently proposed, the I-5 rail alignment alternative would travel across Grapevine meadow between I-5 and Tejon Lake. At a point just past the Department of Water Resources maintenance road the track would enter into the hillside east of Grapevine Creek. Earthwork activity needed to construct the tunnel shafts would require tunneling into the hillside and stockpiling and transport of soil could cause significant water quality effects on Tejon Lake, Grapevine Creek, and associated meadows. Tunneling would likely require dewatering, given the shallow depth to groundwater in the vicinity of Tejon Lake, yet no analysis of these issues has been provided, even at the most cursory of levels. These types of potential impacts could be extremely significant and currently little discussion is presented to allow meaningful analysis and comparison across alternatives.

## Comment Letter O056 Continued



### 3.14.4 Comparison of Alternatives by Region

**C. Bakersfield to Los Angeles**

*High-Speed Train Alternative (page 3.14-15)*

The number of linear feet of impacts to streams is a meaningless number in this analysis. The text indicates that the I-5 corridor has a potential to impact 30,000 linear feet of streams, while the SR-58 route would impact 60,000 linear feet. The report does not mention anything on the types of streams, flow rates, length of downstream impacts, nor does it contain a description of the methodology used to calculate the impacted area nor where the impacts are located. An appropriate number for analysis might be stream crossings (perennial vs. intermittent or ephemeral). This impact could be quantified and could result in a number that could be calculated into acres.

The discussion does indicate that the SR-58 HST alignment would not encroach on any lakes, whereas both of the I-5 Tehachapi alignment(s) would potentially encroach on 18 ac (7 ha) of lakes including Castac Lake in the Castaic Valley of the Tehachapi, and Upper Van Norman Lake south of the San Fernando Pass.

The document mentions that it is impossible to determine which alternative would affect more groundwater resources. At the Program EIR level, however, the amount of tunneling could be compared and used as an indicator of the potential significance of this effect for each alignment

O056-13 cont.

**Hydrological Resources Technical Report**

**Section 2.2.2, State Regulations.** This section does not reflect the latest CDFG Stream Alteration regulations.

**Section 2.3.1, Lakes.** "For the HST Alternative, the majority of acreage of lakes occurs along the undeveloped portions of the SR-58/Antelope Valley and I-5/Grapevine routes." However, this is in error, as SR-58 has no lakes (see Table 2.3-1, Summary of Affected Area for Hydrology and Water Quality).

**Section 2.3.2, Streams.** This section states essentially the same discussion as the section on lakes above. It indicates that..."For the HST Alternative, the majority of acreage of lakes occurs along undeveloped portions of the SR-58/Antelope Valley and I-5 Grapevine routes. This is in error, as the SR-58 Corridor has no lakes and the section is discussing streams.





**Section 2.3.4, Groundwater.** There is no discussion of aquifers in the section other than to mention that there are three major aquifer types in the region. The groundwater component of the project might be a key differentiating section between the tunneling associated with the I-5 Corridor and the tunneling on the SR-58 Corridor. The locations of the aquifers should be shown in an exhibit to give meaning to the location and the possible impacts due to tunneling.

**Table 2.3-1, Summary of Affected Area for Hydrology and Water Quality.** This table is meaningless without providing information as to how these impacts were assessed. It is misplaced and should be included in Section 3.

Page 16 (3rd paragraph): "Additional potential impacts to hydrology and water quality include increased/decreased runoff and stormwater discharge for alteration in the amount of paved surfaces, increased/decreased contribution of automotive-based non-point source contamination, impacts of groundwater discharge or infiltration" should be made into bullet points and included in the preceding paragraph of bullet points.

Page 17: Groundwater Impacts. No rationale is given as to why, if a project is located in an area of 401 acres or more of a groundwater basin that it would necessarily create an impact. An impact would only be created if the project were impacting the basin by interference or withdrawal. There is no rational basis for this analysis of groundwater impacts. Please revise with substantiated evidentiary impacts for groundwater.

O056-13 cont.

Page 18 (2nd paragraph): Differentiate conclusions associated with HST between I-5 Corridor and SR-58 alignment option. (4th paragraph): The paragraph requires a conclusion per CEQA if the impacts are potentially significant. It is not enough, to merely state the one alternative has fewer acres than another. A definitive statement regarding potentially significant impacts must be made.

Page 19 (1st paragraph): The paragraph requires a conclusion, per CEQA, if the impacts are potentially significant. It is not enough, to merely state that one alternative has fewer acres than another. A definitive statement regarding potentially significant impacts must be made. (3rd paragraph): The paragraph requires a conclusion per CEQA if the impacts are potentially significant. It is not enough, to merely state that one alternative has fewer acres than another. A definitive statement regarding potentially significant impacts must be made.

## Comment Letter O056 Continued

SECTION 3.15 - BIOLOGICAL RESOURCES AND WETLANDS

**General Comments**

Confidence in the accuracy of the assessment of biological resources and wetlands impacts in the Bakersfield to Sylmar segment is lacking due to inherent weaknesses in the database coverage and methodology used in the EIR/EIS. These flaws are described in the specific comments that follow.

**Specific Comments**

***Study Area***

The biological resources study area was 1,000 feet in urbanized areas, 0.25 mile in undeveloped areas, and 0.50 mile in sensitive areas. The criteria for "urbanized," "undeveloped," and "sensitive" is not defined in the EIR/EIS. The EIR/EIS goes on to state that the study area in the Bakersfield to Los Angeles region was 0.5 mile, which was supposed to be used in sensitive areas. The document further states that the broader study area was used due to the Tehachapi mountain crossings. The urbanized area study criteria does not appear to have been used in the highly urbanized area of Los Angeles. The use of each buffer area differed from segment to segment based upon the judgment of the technical report team.

O056-14

***Data Sources***

The data used to compare the potential impacts to biological resources in the Draft EIR/EIS was limited to available digitized data that was dated or inherently unreliable. These data sources are described below.

Data sources used to determine which sensitive vegetation communities, and special-status plant and wildlife species may occur within the buffer zone were limited to the California Gap Analysis and California Natural Diversity Database (CNDDB). It should be noted that U.S. Fish and Wildlife Service (USFWS) designated critical habitat was reported for other HST sections, but not for the Los Angeles-Bakersfield section. Critical habitat for the California gnatcatcher, the California red-legged frog, and the arroyo toad occur in the vicinity of this study area. In particular, the segment paralleling Interstate 5 in the Tehachapi Mountains passes through critical habitat designated for the California condor. Additionally, Appendix 3-15C states that the California Native Plant Society (CNPS) database was also not included in the analysis since digital GIS data was not available.

The University of California, Santa Barbara in coordination with the United States Geological Survey (USGS) Biological Resources Division, conducted California Gap Analysis - The California GAP Analysis project. The maps were created through photo interpretation of digital satellite data guided by overlays





of existing vegetation maps, land use maps, and forest inventory data. Specific standards for resolution and scale, accuracy, and format were set. However, it should be noted that no field verification was conducted. The lack of field verification is a flaw in the biological section as many of the databases relied upon by the authors are unreliable, have data gaps, and do not always represent current habitat conditions.

This data set was used in the EIR/EIS to determine what sensitive vegetation communities exist within the buffer area. Sensitive vegetation communities include coastal sage scrub, willow riparian woodland, and alluvial fan sage scrub that could require mitigation for impacts under CEQA. The maps are expected to provide a regional context for vegetation and habitat, but may not provide information at a suitable scale for making alignment recommendations or decisions.

**CNDDB -** The CNDDB database is an inventory of special-status habitats, plants, and wildlife. The CNDDB records are submitted by biologists who observe the species during surveys, or are historical records. Therefore, the areas that have been surveyed for several projects or large projects, or are considered biologically sensitive, would have more recorded occurrences of sensitive species. In other words, current or draft versions of HCP's in the area, or other larger project documents, should have been reviewed and incorporated. Consequently, the EIR/EIS must be revised to incorporate this information.

O056-14 cont.

Each occurrence in the CNDDB database is recorded on a USGS 7.5-minute quadrangle, which encompasses an area of 49 to 70 square miles. In many segments of the HST alignments, an area this large would include several habitat types and elevations. The CNDDB database lists the habitat type for each species, and often includes a detailed description of its location, however, it does not appear that these factors were taken into consideration during the preparation of the EIR/EIS.

As shown in Figure 3-15-05, the CNDDB GIS data contains large polygons of different shapes that apparently depict Threatened and Endangered species habitat. How these polygons are designed based upon submitted records is not explained in the EIR/EIS.

The EIR/EIS also uses the Missing Linkages report as its basis for analysis of impacts on movement corridors/habitat linkages. This particular report is not based upon any measurable or otherwise empirical study or studies; rather, it is a very broad-based analysis, across the entire state, of where habitat linkages *could* be or *might* be if current land uses were not prohibitive.

In conclusion, the use of unreliable data with unknown or speculative methodology, the failure to field verify data sources, and the failure to use existing/extant data and reports where available, are flaws in the EIR/EIS. This is an issue of significant concern, and it is important that the EIR/EIS address this issue fully and accurately in order to comply with CEQA.